

Junior Science, Engineering and Humanities Symposium

STUDENT RESEARCH SHARING SESSION I



Cardinal Room
8:30 p.m. - 10:00 p.m.



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- **Tara Humphreys**, “Investigating Essential Oils as Potential Antimicrobial Agents for Swine Waste Water,” Tuscumbia High School, Tuscumbia, Missouri, Constance Wyrick, Sponsoring Teacher
 - **Koren Haley**, “A Study of the Influence of Beverage Containers on Content Perception,” Tuscumbia High School, Tuscumbia, Missouri, Constance Wyrick, Sponsoring Teacher
 - **Cole Lawson**, A Study of the Effects of Plant Hormones on Thigmotropism in *Ipomoea tricolor*,” Tuscumbia High School, Tuscumbia, Missouri, Constance Wyrick, Sponsoring Teacher
 - **Della Spratt**, “The Effects of pH Levels on Mutant-Type Arabidopsis thaliana Gene bam 1-3,” Elsberry High School, Elsberry, Missouri, Kenna Heitman, Sponsoring Teacher
 - **Paige Wood**, “Battling Bioaerosols: Investigating Bioaerosol Contamination in Poultry Housing Units,” Tuscumbia High School, Tuscumbia, Missouri, Constance Wyrick, Sponsoring Teacher

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STUDENT RESEARCH SHARING SESSION II



Chouteau Room
8:30 p.m. - 10:00 p.m.



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- **Brittany Cusanelli**, “Do Green Cleaners Really Work?” Ursuline Academy, St. Louis, Missouri, Marie Sherman, Sponsoring Teacher
 - **Jena Doering**, “You Can't Hide Your Lying Eyes,” Maplewood-Richmond Heights High School, Maplewood, Missouri, Kathleen Dwyer, Sponsoring Teacher
 - **Roy Gladney**, “Efficiency of Corn Waste in Oil Remediation,” Maplewood-Richmond Heights High School, Maplewood, Missouri, Kathleen Dwyer, Sponsoring Teacher
 - **Juan Miguel Artigas Herrera**, “Development of a Greener Refrigerant,” Maplewood-Richmond Heights High School, Maplewood, Missouri, Kathleen Dwyer, Sponsoring Teacher
 - **Kyle Rieger**, “War Against Aliens,” Maplewood-Richmond Heights High School, Maplewood, Missouri, Kathleen Dwyer, Sponsoring Teacher

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STUDENT RESEARCH SHARING SESSION III



Clayton Room
8:30 p.m. - 10:00 p.m.



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- **Wyatt Bake**, “A Study of the Synthesis of useful Products from Waste Cooking Oil,” Pleasant Hope High School, Pleasant Hope, Missouri, James Flora, Sponsoring Teacher
 - **Jacob Byrne**, “A Safer Chinstrap/Suspension Combination for the Advanced Combat Helmet,” Camdenton High School, Camdenton, Missouri, Christopher Reeves and Kimberly Griggs, Sponsoring Teachers
 - **Charlie Collins**, “Music Therapy: The Effects of Music on Adolescence Stress Levels,” Camdenton High School, Camdenton, Missouri, Christopher Reeves and Kimberly Griggs, Sponsoring Teachers
 - **Mary M. Luber**, “Developing an Automated Nitrogen probe for Preliminary *Escherichia coli* Indicators in Lake of the Ozarks, MO,” Camdenton High School, Camdenton, MO, Christopher Reeves and Kimberly Griggs, Sponsoring Teachers
 - **James McGuire**, “The Effect of Systemic Non-Cooperation on Cooperation in Two-Person Problem-Solving Games,” Camdenton High School, Camdenton, Missouri, Christopher Reeves and Kimberly Griggs, Sponsoring Teachers

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STUDENT RESEARCH SHARING SESSION IV



Frontenac Room
8:30 p.m. - 10:00 p.m.



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- **Vikram Arun**, “The Effect of Natural Alternatives on Eliminating Household Mold,” Columbia Area Career Center, Columbia, Missouri, Christine Roberson, Sponsoring Teacher
 - **Kaylyn Bauer**, “The Effect of Bisphenol-A on the Sexual Ratio of *Oryzias latipes*,” Wentzville Holt High School, Wentzville, Missouri, Jennifer Berendzen, Sponsoring Teacher
 - **Raisa Buenaventura**, “The Effect of Increasing Ampicillin Concentrations on Developing Antibiotic Resistance in *Escherichia coli*,” Wentzville Holt High School, Wentzville, Missouri, Jennifer Berendzen, Sponsoring Teacher
 - **Angela Deters**, “Using Microbes for Oil Spill Reclamation,” Timberland High School, Wentzville, Missouri, Terry Brennan, Sponsoring Teacher
 - **Caleb Smith**, “The Effect of Turbine Type and Wind Speed on the Amount of Power Produced by a Wind Turbine Placed on a Car,” Wentzville Holt High School, Wentzville, Missouri, Jennifer Berendzen, Sponsoring Teacher

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STUDENT RESEARCH SHARING SESSION V



Missouri I Room
8:30 p.m. - 10:00 p.m.



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- **Ankit Gupta**, “25-hydroxycholesterol-induced Cholesterol Metabolism Promotes Cell Membrane Permeability through Water Transport Mechanisms,” Rockwood Summit High School, Fenton, Missouri, Tracie Summerville, Sponsoring Teacher
 - **Paige Holgate**, “Optimization of Nile Red Lipid Analysis in Newly Found Algae Isolate E06:2,” Rockwood Summit High School, Fenton, Missouri, Tracie Summerville, Sponsoring Teacher
 - **Lexi Sherman**, “The Effects of Natural Peroxidase as a Lignin Decomposer in Modern Landfills,” Mansfield High School, Mansfield, Missouri, Pam Probert, Sponsoring Teacher
 - **Alexandra Vohs**, “Outcome of Prostate Brachytherapy at Missouri Baptist Medical Center,” Rockwood Summit High School, Fenton, Missouri, Tracie Underwood, Sponsoring Teacher
 - **Kendra Woolman & Jordyn Loge**, “The Effects of Chloramines on the Imbibition and Germination of Monocot and Dicot Seeds,” Mansfield High School, Mansfield, Missouri, Pam Probert, Sponsoring Teacher

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STUDENT RESEARCH SHARING SESSION VI



Missouri II Room
8:30 p.m. - 10:00 p.m.



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- **Nicholas Andriano**, “Building the Foundation: A Study of Standardized Test Scores on College Performance,” Mid-Buchanan High School, Faucett, Missouri, Lindsay Ussary, Sponsoring Teacher
 - **Luke Heisele**, “Efficiency of Savonius Wind Turbines with Air Directors,” Timberland High School, Wentzville, MO, Terry Brennan, Sponsoring Teacher
 - **Mariah Mathews**, “Efficiency of a Vertical Axis Water Turbine at Producing Power When Exposed to Various Current Speeds,” West Platte High School, Weston, Missouri, Janel Coulson, Sponsoring Teacher
 - **Allison Reed**, “The Effectiveness of Metal Nitrates as an Antimicrobial Agent on Travel Accommodations” Mid-Buchanan High School, Faucett, Missouri, Lindsay Ussary, Sponsoring Teacher
 - **Seth vonSeggern**, “The Effects of the Grade Level in Which Students are Enrolled in Algebra 1 on the Percentage of Students Scoring at or Above Proficient on the Missouri End-of-Course Exam,” West Platte High School, Weston, Missouri, Janel Coulson, Sponsoring Teacher
 - **QinQin Yu**, “Dynamic Holography with a Digital Camera and Photorefractive Polymers,” Rock Bridge High School, Columbia, Missouri, Christine Roberson, Sponsoring Teacher